AMENDMENTS TO SPECIFICATION

Please replace the section beginning on page 6, line 31, and ending on page 7, line 19, with the following section:

Figure 4 shows the (MMU)Sema6A-1 distribution in mouse adult and embryonic tissues revealed by in-situ hybridizations~~;~~ of embryonic (panels A-D) and adult (panels E-G) tissues, showing dominant expression in embryonic brain stem (panels A, B, and D), optic precursors (panels A and C), spinal cord (panels B and D), limb (panel B), and adult piriform cortex (panel E), cerebellar regions (panels F and G) and olfactory bulb (panel G);

Figure 5 shows, ~~expression, protein size and dimerization of (HAS)SEMA6A-1~~ in panel A, a graphical overview on the domain structure of (HAS)SEMA6A-1 and the subcloning strategy; and, in panels B and C, Western blots displaying the protein size and its dimerization abilities;

Figure 6 shows a sequence alignment between SEMA6A-1 and Zyxin, wherein Figure 6a ~~shows~~ is a SEMA6A-1 sequence SEQ ID NO:8, of a ~~the coding nucleotide sequence to~~ a binding domain, and ~~Figure~~ 6b shows SEQ ID NO:9, ~~the~~ a sequence of Zyxin;

Figure 7 shows immunoprecipitation of (HAS)SEMA6A-1 with α-Evl and α-Mena antibodies. In panel A: (α-Evl); Vector only (lane 1), pFlagSEMA6A-1 (lane 2), HT22 supplemented with purified SEMA6A-1 protein (lane 3), pFlagSEMA6A-1 precipitation using only protein A beads (lane 4), control detection of pFlagSEMA6A-1 transfected cells (lane 5), SEMA6A-1 purified control (lane 6), untransfected HT22 control (lane 7), Evl control in HT22 (lane 8); In panel B: (α-Mena): Vector only (lane 1), pFlagSEMA6A-1 (lane 2), HT22 supplemented with purified SEMA6A-1

protein (lane 3), control detection of pFlagSEMA6A-1 transfected cells (lane 4);

Please replace the section beginning on page 9, line 24, and ending on page 10, line 10, with the following section:

In order to show that Ena/VASP proteins might be potential intracellular binding partners for (HAS) SEMA6A-1 (see Figure 6, Alignment of (HAS)SEMA6A-1 (SEQ ID NO:8) and Zyxin (SEQ ID NO:(9)) and the (HAS)SEMA6A-1 and Ena/VASP-like proteins might be interacting partners a Xbal/Scal fragment of the SEMA6A-1 clone covering the full length protein sequence only lacking the signal sequence was subcloned into the pFLAGE-CMV-1 vector. This vector allows rapid detection of the expressed fusion protein through the N-terminal Flag-Taq fused to the protein. Immunoblotting of the tagged protein (Flag-SEMA6A-1) displayed a protein sized of 125 kDa which closely corresponds to the predicted protein size. Expression in a human cell line (HEK293) and in a clonal mouse hippocampal cell line (HT22) followed by immunofluorescent analysis revealed that SEMA6A-1 is targeted to the cell surface and colocalizes with Evl and Mena, indicating a possible interaction between these proteins (see Figure 5, showing, in panel A, a graphical overview on the domain structure of (HAS)SEMA6A-1 and the subcloning strategy. In addition, Western blots displaying the protein size and its dimerization abilities are shown in panels B and C).

Please substitute pages 1 through 25 of the *Sequence Listing* attached hereto for the *Sequence Listing* behind the *Abstract* of the application.

AMENDMENTS TO DRAWINGS

Submitted herewith for the Examiner's approval, the amendments to Figures 1-2 and 6 are shown in red in compliance with 37 CFR 1.121(d) are submitted on separate sheets enclosed with this Response.